

## Project Analysis Worksheet

### A. General Information

Provide basic information about the project including: *Project Title* – The proper name used to identify this project; *Project Working Title* - The working name or acronym that will be used for the project; *Proponent Secretary* - The Secretary to whom the proponent agency is assigned or the Secretary that is sponsoring an enterprise project; *Proponent Agency* – The agency that will be responsible for the management of the project; *Prepared by* – The person(s) preparing this document; *Date Prepared* - The date this document is initially prepared.

Virginia Educational Information			
<i>Project Title:</i>	Management System	<i>Project Working Title:</i>	Virginia EIMS
<i>Proponent Secretary:</i>	Secretary of Education	<i>Proponent Agency:</i>	Department of Education
<i>Prepared by:</i>	B. Canada	<i>Date Prepared:</i>	June 16, 2003 Revised 12/2003

### B. Project Purpose

Explain the business reason(s) for doing this project.

#### 1. Business Problem

The Business Problem is a question, issue, or situation, pertaining to the business, which needs to be answered or resolved. State in specific terms the problem or issue this project will resolve. Often, the Business Problem is reflected as a critical business issue or initiative in the Agency's Strategic Plan or Information Technology Strategic Plan.

**Implementing student-based data collection and reporting** is identified as a critical business issue in the Department of Education *Agency Strategic Plan*. The Virginia EIMS will enable the Department of Education to meet state and federal reporting requirements and enable stakeholders at all levels of education to make informed educational decisions based on accurate and timely information.

To meet this critical need, the Department of Education wishes to implement a statewide educational information management system that will allow school divisions to maintain their current student information systems, input data into web-based systems, meet student-level data reporting requirements, and maintain security of student information. At the core of this system is assignment of a unique "Testing Identifier" assigned to each student in the state that is permanent, unduplicated, and ubiquitous.

While Virginia is recognized as a leader among states for our high-quality education system, we lag behind other states in our ability to analyze and report timely and accurate information about student and school performance. There is a growing demand for education information that must be met without overburdening the schools to submit more reports. The *No Child Left Behind Act of 2001*, a new federal education law that provides almost \$300 million annually for education in Virginia, mandates a structured reporting format that requires disaggregation of student data, annual assessment of students, and complex school ratings. While individual student assessment records are available for any given test, the lack of a permanent unique identifier, makes it impossible to gauge the progress of any given student over time.

Over two million Standards of Learning Assessments were administered to Virginia's 1.2 million students in Virginia for the 2001-2002 school year. This number is projected to increase to more than 2.5 million in 2005-2006 when the additional testing requirements of the *No Child Left Behind Act of 2001* are phased in. School divisions must hand code detailed student demographic information on to a "bubble form" for each test taken or pay a high price to have their forms pre-coded by the testing vendor (\$.26 per student per test). This coding system is antiquated, time-consuming, and fraught with errors.

Currently, Virginia school divisions submit dozens of major reports throughout the year in order to comply with state and federal reporting requirements. Many staff hours are spent at the school, division, and state level generating, reviewing, and verifying these reports. The payback from Virginia EIMS includes improving the quality of education for Virginia students by redirecting the time and resources of teachers, guidance counselors, clerical staff, and other administrators (estimated to be 241,000 hours annually) away from paperwork and toward tasks that directly benefit students.

A longitudinal student record system will enable Virginia to respond to increased demands for timely education performance information with less difficulty, greatly improve the quality of Virginia education data, and will ultimately result in a reduction of the reporting burden on Virginia's schools and school divisions.

## **2. Project Business Objectives**

*Define the specific Business Objectives of the project that correlate to the strategic initiatives or issues identified in the Commonwealth or Agency Strategic Plan. Every Business Objective must relate to at least one strategic initiative or issue and every initiative or issue cited must relate to at least one project Business Objective.*

<b><i>Commonwealth or Agency Strategic Plan – Critical Issues</i></b>	<b><i>Project Business Objectives</i></b>
<b>Implementing student-based data collection and reporting</b>	<p>Meet reporting requirements of NCLB and other state/federal mandates.</p> <p>Identify schools and divisions for improvement and corrective action.</p> <p>Communicate assessment results early enough to take corrective action.</p> <p>Foster data-driven decision-making.</p> <p>Develop standard data definitions and reporting formats.</p>
<b>Implementing the NCLB Act</b>	<p>Hold schools and divisions accountable for Adequate Yearly Progress (AYP), including participation in the Standards of Learning Assessments.</p> <p>Develop and administer additional Standards of Learning Assessments.</p> <p>Produce annual school, division, and state report cards.</p>
<b>Tracking student progress</b>	<p>Assist parents and school divisions in monitoring student progress on the Standards of Learning Assessments for verified credit required to earn a high school diploma.</p>

<b>Closing the achievement gap</b>	Provide timely information on student performance to assist schools in monitoring progress toward closing the achievement gap among various subgroups of students, including minority students, limited English proficient students, and students with disabilities.
<b>Improving reading skills</b>	Provide timely information on student performance in reading to assist schools in expanding programs to improve reading performance.
<b>Helping low-performing schools</b>	Provide timely information that will help the department use data to identify areas for improvement as we assist schools in developing unique strategies to meet the needs of students. Assist schools in establishing systems to collect, analyze, and use data to make instructional decisions.
<b>Focusing on customer service and parent involvement</b>	Provide students and their families with accurate and timely information about student performance and progress toward graduation. Share expected gains in educational performance with a broad audience consisting of parents, students, teachers, administrators, policymakers, and the public in general. Consolidate various state and federal reporting requirements into Virginia EIMS, freeing school division personnel to focus more time on student instruction.

### **3. Core Business Activity Impacted**

*Core Business Activities are agency defined cross-functional processes that produce the agency's primary products and services, or support their production. List the Core Business Activities impacted by the project and identify the impact.*

<b><i>Agency Core Business Activity</i></b>	<b><i>Impact on Core Business Activity</i></b>
<b>State Education Services</b>	Virginia EIMS will have a significant positive impact on the way the Department of Education conducts business. Specialists in the core academic areas will have timely information on which to base instructional assistance. Academic Reviewers will have access to a broad array of data on school performance that will enable them to tailor recommendations accordingly. Specialists in the area of Policy and Public Affairs will have access to data and analysis tools that will enable them to better answer constituent inquiries. Budget specialists will have timely and accurate information for forecasting and modeling. The consolidation of federal and state reporting requirements into an automated system will significantly reduce the number of

	surveys, data collections, and ad-hoc databases currently developed by various specialists throughout the department. Professional instructional staff will then have more time to focus on improving academic achievement.
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#### **4. Constraints**

*Constraints are items that by their nature restrict choice. Identify constraints that will influence the selection of a solution to resolve the business problem. Constraints can include but are not limited to: time, funding, personnel, facilities, and management limitations.*

The selection of a solution for Virginia EIMS may be influenced by the following constraints:

##### **1. Decentralized Student Information Systems**

The Constitution of Virginia and the Code of Virginia place responsibility for supervision of schools with local school boards, not the state.

Student information systems are historically decentralized with selection, design, maintenance, and control at the local level. At least seven major vendor packages are in use. There is a lack of standardization across and within divisions. Multiple coding structures are in place, even within a given school division and vendor package. Crosswalks must be developed when data are moved from one system to another.

Virginia does not currently have a statewide student identifier.

##### **2. Timing**

School divisions will require time to prepare their systems to be compatible with the data transfer formats that may be required by Virginia EIMS.

The project timeline, particularly delivery dates, must synchronize with the state budgeting cycle.

Virginia must meet the deadlines established by NCLB.

The solution must take into consideration that implementation in the middle of a school year could be extremely disruptive to school division personnel.

##### **3. Funding Constraints**

School Divisions will require funding to alter their systems to maintain a state “Testing Identifier” and to implement standard codes.

The Governor has committed funding to the development and implementation of the EIMS.

##### **4. Personnel Constraints**

Changing the scope of the department’s services is a critical issue in the Department of Education *Agency Strategic Plan*. The department has experienced a thirty percent reduction in

employment levels over the past twelve years.

School divisions have experienced similar reductions in staffing with no commensurate reduction in responsibilities or tasks. Stakeholder expectations continue to grow, and all involved are struggling to meet the state's academic standards.

#### 5. Equipment and Infrastructure

Implementation of Virginia EIMS must complement and occur concurrently with Virginia's IT consolidation effort.

The solution needs to take into account that school divisions are not necessarily equipped with the latest technology, particularly on desktop computers. For instructional computing, the department recommends only a Pentium 750 or better.

#### 6. Management Constraints

The project has high-level commitment and sponsorship. Competing priorities can be mitigated by oversight and executive leadership.

#### 7. Privacy and Confidentiality

Stakeholder concern over the privacy and legitimate use of student information must be mitigated. The solution must support the highest levels of privacy and confidentiality that are technically and procedurally feasible. An agency-wide Data Management and Use Policy must be developed and implemented.

### **C. Preliminary Project Description**

*Provide a preliminary description of the project approach, the customer(s) served, and expected benefits. The approach is the overall strategy for solving the business problem. The Preliminary Project Description is derived from the Project Description Statement and Section B, Project Purpose. (This description establishes the framework for identifying potential solutions.)*

## The Project Approach

The Department of Education has made significant progress in understanding and implementing various aspects of the new law since the NCLB was signed into law on January 8, 2002. A major portion of this understanding was the impact of the requirements of the law on information systems. The Department also studied the implementation of longitudinal student information systems by other states, and collected other state's system requirements documents.

Additionally, the department contracted with Evaluation Software Publishing (ESP), a nationally recognized expert in educational information at the school, division, state, and federal levels. ESP has identified 13 tasks that states need to complete in order to implement longitudinal student information systems. Further research was conducted to determine Virginia's implementation status.

Task	Virginia's Status
1. Develop a real-time directory of state education personnel that is web-based	Complete
2. Develop a secure sign-on system that provides authentication of data providers and users that is managed by school divisions for their data providers.	Complete
3. Implement web-based data entry and file submission.	Complete for major data collections.
4. Form a broad-based advisory group of school division personnel.	The Student Information Advisory Group (SIAG) was formed in 2000 and continues to meet regularly.
5. Form a project management team of DOE business area representatives that will guide the implementation of Virginia EIMS.	Project management team established. On-going meetings are in progress.
6. Develop a statewide education data dictionary with standard definitions and codes.	Development is in progress for essential components of the student record. The SIAG is guiding this effort.
7. Develop a data analysis and reporting capability within DOE.	Not started.
8. Conduct a student record collection.	An initial collection of non-identifiable student records was conducted in September 2003. This step "introduces" the concept of a student record collection to school divisions.
9. Meet the Requirements of NCLB, including determining Adequate Yearly Progress and Report Cards.	An integral component of Virginia EIMS, the phase-in of these activities is described in Virginia's <i>Accountability Workbook</i> , approved by the US Department of Education on June 10, 2003
10. Developed detailed requirements and a Request for Proposals.	In progress. In addition, the Department proposed Virginia EIMS for consideration as

	a major project for the Education Oversight Committee and the Commonwealth CIO.
11. Conduct statewide implementation Virginia EIMS.	Not started.
12. Provide resources to assist school divisions with implementation of Virginia EIMS.	Not started. Occurs concurrent with Task 11.
13. Maintain and support Virginia EIMS.	Not started. Ongoing after 2006.

The study concluded that the Virginia Department of Education had the capacity to succeed with Virginia EIMS, given adequate resources and support. The department has a track record of successful project completion, both in-house and contracted; and a stable and standards-based technology architecture.

In addition to the study by ESP, VDOE has determined that the following must be included in the detailed system requirements of Virginia EIMS.

The system must be consistent with the COVA Enterprise Architecture and the Governor's *Strategic Plan for Technology*.

The system must adhere to COVA Policies, Standards and Guidelines for information security. Development of the system must adhere to COVA project management guidelines.

The system must comply with state and federal requirements for handicap access, the Family Education and Right to Privacy Act (FERPA), the Virginia Freedom of Information Act (FOIA), and Virginia *Guidelines for the Management of Student Records*.

The Department of Education will develop detailed requirements for the system components identified in the following chart.

System Component	Customer(s) Served	Expected Benefit(s)
Training Component	Schools, Divisions, State	Ability to use the information gathered for more informed educational decision-making
Testing Identifier Component	Schools, Divisions, State	Data accuracy, ability to gauge individual student progress over time.
Decision Support Component	Public, Schools, Divisions, State	Standard tools for data analysis. Savings to school divisions.
Data Loader Component	Schools, Divisions, State	Eliminates costly and redundant effort of mapping and loading the data into various systems.
Data Transfer Component	Divisions, State	Standard ASCII and XML reduce redundant programming time and support vendor-



		independence.
Reporting Component	Schools, Divisions, State	Standard and ad-hoc reports eliminate redundant effort, meet federal and state requirements.
Pre-Identification Component	Schools, Divisions, State	Data accuracy, time and money savings for school divisions and state.
Program Participation Components	Schools, Divisions, State	Data accuracy, time and money savings for school divisions and state. Ability to meet multiple federal and state reporting requirements.

#### **D. Solution(s) Analysis – Part I**

*Describe each potentially viable solution, and evaluate the solution against the decision criteria described below in D.1 thru D.2.e. Duplicate the Evaluation Process (D.1 thru D.2.e) for each solution being considered.*

##### **1. Description of Solution**

*Provide an identifier and a brief title of the potential solution. The description should include enough detail to provide a clear understanding of the solution and should differentiate it from the other potential solutions. Also, describe how the solution will resolve the Business Problem defined in Section B of this document.*

<b><i>Solution Identifier</i></b>	<b><i>1</i></b>	<b><i>Short Solution Title</i></b>	In-house development of Virginia EIMS
<b><i>Solution Description and Detail</i></b>			
Use in-house VDOE resources to custom-develop Virginia EIMS using existing VDOE architectural components and development tools. Ongoing support for the system would be provided by VDOE.			
<b><i>Solution Identifier</i></b>	<b><i>2</i></b>	<b><i>Short Solution Title</i></b>	Outsource development of Virginia EIMS
<b><i>Solution Description and Detail</i></b>			
Contract with a third party to custom-develop Virginia EIMS for the existing VDOE architectural components and development tools. Upon completion of the project, turn the system over to VDOE for support or contract for support from third party.			
<b><i>Solution Identifier</i></b>	<b><i>3</i></b>	<b><i>Short Solution Title</i></b>	Outsource solution for Virginia EIMS
<b><i>Solution Description and Detail</i></b>			
Allow vendor to propose solution that may include a combination of COTS (commercial off the shelf), custom development, leveraging of work completed for other state departments of			



education, use of multiple vendor packages for components, and multiple options for hosting and ongoing support. VDOE selects the best, most cost-effective option.

## **2. Decision Criteria**

*The following Decision Criteria are recommended for evaluation of each potential solution. All potential solutions must be evaluated against the same set of Decision Criteria. Additional Decision Criteria may be used, if needed.*

### **a) Business Process Impact**

*Describe how the potential solution will impact current Business Processes and the degree of organizational change and stakeholder resistance anticipated.*

<b>Solution Identifier</b>	<b>1</b>	<b>Short Solution Title</b>	In-house development of Virginia EIMS
In-house development will have a significant impact on current business. There are only four system developers on the VDOE staff, with a backlog of work. Additional resources will need to be added in order to maintain the current workload and Virginia EIMS development. Professional trainers will be needed to support school divisions. VDOE would also need to maintain a “help desk” for school divisions. We anticipate a minimum of stakeholder resistance with this solution.			
<b>Solution Identifier</b>	<b>2</b>	<b>Short Solution Title</b>	Outsource development of Virginia EIMS
Out-sourcing the custom development of Virginia EIMS will have a lesser impact on current business. It may be necessary to add resources when the system is turned over to VDOE to maintain. We would expect the third-party to provide professional trainers to support school divisions. VDOE would also need to maintain a “help desk” for school divisions. We anticipate a minimum of stakeholder resistance with this solution.			
<b>Solution Identifier</b>	<b>3</b>	<b>Short Solution Title</b>	Outsource solution for Virginia EIMS
Outsourcing the solution for Virginia EIMS will have the least impact on current business practices. VDOE development staff will be able to maintain the current workload. We would expect the vendor to provide a solution to initial and ongoing training requirements. We would expect the vendor to propose a number of “help desk” solutions. We anticipate the least amount of stakeholder resistance with the solution.			

**b) Technical Feasibility**

*Describe any special technical considerations that would be required to implement the potential solution, such as technical experience required for project team members. Also, describe the level of technical complexity of the solution.*

**Solution Identifier** 1 **Short Solution Title** In-house development of Virginia EIMS

In-house development of a custom solution for Virginia EIMS will require the addition of resources with technical skill sets that match the VDOE application architecture. While it is far-reaching, the concept of Virginia EIMS is not technically complex.

**Solution Identifier** 2 **Short Solution Title** Outsource development of Virginia EIMS

In-house support of a custom solution for Virginia EIMS will require the addition of resources with technical skills that match the DOE application architecture. While it is far-reaching, the concept of Virginia EIMS is not technically complex.

**Solution Identifier** 3 **Short Solution Title** Outsource solution for Virginia EIMS

We would expect an experienced vendor to serve as the primary for the outsourced solution to Virginia EIMS. The vendor would be required to provide a project team with the appropriate technical skills for completion of the project. While it is far-reaching, the concept of Virginia EIMS is not technically complex.

**c) Maturity of Solution**

*Describe the level of technical maturity for the potential solution. The description should address questions such as "Is the potential solution technically proven or a recent innovation? Has the technology solution being proposed fully matured? Is it nearing obsolescence? Are services and expertise required to support the potential technical solution readily available?"*

**Solution Identifier** 1 **Short Solution Title** In-house development of Virginia EIMS

The solution is technically proven, although not in Virginia. Twenty-three states currently use a statewide student information system. The technology being proposed is the VDOE in-house architecture, which has an excellent track record of stability. The services and expertise required to support the solution are readily available.

**Solution Identifier** 2 **Short Solution Title** Outsource development of Virginia EIMS

The solution is technically proven, although not in Virginia. Twenty-three states currently use a statewide student information system. The technology being proposed is the VDOE in-house architecture, which has an excellent track record of stability. The services and expertise required to support the solution are readily available.

**Solution Identifier** 3 **Short Solution Title** Outsource solution for Virginia EIMS

The solution is technically proven, although not in Virginia. Twenty-three states currently use a

statewide student information system. The technology being proposed may be the VDOE in-house architecture, which has an excellent track record of stability. It is unknown if a hosted-architecture would have the same stability. The services and expertise required to support the solution are readily available.

**d) Resource Estimate**

*Estimate all the resources required to implement the solution. Resources include funding, personnel, facilities, customer support, equipment, and any other resources needed to implement the solution.*

**Solution Identifier** 1 **Short Solution Title** In-house development of Virginia EIMS

<b>Resource</b>	<b>Requirement(s)</b>
<i>Funding</i>	Funding for additional personnel, software licenses, hardware, training.
<i>Project Team</i>	Project Manager Additional programming support. Additional DBA, and engineering support.
<i>Customer Support</i>	Help desk personnel. Training specialists. Student information systems specialists.
<i>Facilities</i>	Possible modifications to computer room to accommodate additional electrical requirements.
<i>Equipment</i>	Likely purchase of additional servers and backup devices.
<i>Software Tools</i>	Additional Oracle/SAS developer seats. Upgrade of database licensing if CPUs are added.
<i>Other (Be specific)</i>	Funding for school division implementation. Client (school division and VDOE) availability.

**Solution Identifier** 2 **Short Solution Title** Outsource development of Virginia EIMS

<i><b>Resource</b></i>	<i><b>Requirement(s)</b></i>
<i>Funding</i>	Funding for additional personnel, software licenses, hardware, training.
<i>Project Team</i>	Project Manager Additional DBA and engineering support.
<i>Customer Support</i>	Help desk personnel. Training specialists. Student information systems specialists.
<i>Facilities</i>	Possible modifications to computer room to accommodate additional electrical requirements.
<i>Equipment</i>	Likely purchase of additional servers and backup devices.
<i>Software Tools</i>	Additional Oracle/SAS developer seats. Upgrade of database licensing if CPUs are added.
<i>Other (Be specific)</i>	Funding for school division implementation. Client (school division and VDOE) availability.

***Solution Identifier***      3      ***Short Solution Title***    Outsource solution for Virginia EIMS

<i><b>Resource</b></i>	<i><b>Requirement(s)</b></i>
<i>Funding</i>	Funding for additional personal and outsourced-solution
<i>Project Team</i>	Project Manager
<i>Customer Support</i>	Student information systems specialists.
<i>Facilities</i>	Possible modifications to computer room to accommodate additional electrical requirements.
<i>Equipment</i>	Depending on solution, may result in purchase of additional servers and backup devices.
<i>Software Tools</i>	Depending on proposed solution, possible purchase/upgrade of software licenses.

<i>Other (Be specific)</i>	Funding for school division implementation. Client (school division and VDOE) availability.
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**e) Constraints Impact**

*Describe how the solution fits within the constraints identified in Section B. Specifically address any time or schedule constraints.*

<b>Solution Identifier</b>	<b>1</b>	<b>Short Solution Title</b>	In-house development of Virginia EIMS
<b>Constraint Number</b>	<b>Does this solution “fit” within the constraint?</b>		
1	Yes. Takes into account that SIS are decentralized.		
2	Not likely. Obtaining the right resources for in-house development may place the schedule at risk.		
3	Yes, if funded.		
4	Not likely. Scope of services continues to increase.		
5	Possibly. The efforts must be highly coordinated.		
6	Yes. This project has a high-level of support.		
7	Possibly. Stakeholder concern may increase.		
<b>Solution Identifier</b>	<b>2</b>	<b>Short Solution Title</b>	Outsource development of Virginia EIMS
<b>Constraint Number</b>	<b>Does this solution “fit” within the constraint?</b>		
1	Yes. Takes into account that SIS are decentralized.		
2	Yes. Uses outside resources for development		
3	Yes, if funded.		
4	Not likely. Scope of services continues to increase.		
5	Possibly. The efforts must be highly coordinated.		
6	Yes. This project has a high-level of support.		
7	Possibly. Stakeholder concern may increase.		
<b>Solution Identifier</b>	<b>3</b>	<b>Short Solution Title</b>	Outsource solution for Virginia EIMS
<b>Constraint Number</b>	<b>Does this solution “fit” within the constraint?</b>		
1	Yes. Takes into account that SIS are decentralized.		
2	Yes. Uses outside resources for development		
3	Yes, if funded.		
4	Yes. Takes into account increase in scope of services.		
5	Yes. Less coordination required.		
6	Yes. This project has a high-level of support.		
7	Possibly. Use of an outside vendor may mitigate level of concern.		

<b>Solution Identifier</b>	<u>1</u>	<b>Short Solution Title</b>	In-house development of Virginia EIMS
<b>Based on decision criteria 2.a-2.e, is the potential solution a viable solution?</b>			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If yes, continue to Section E (Solution(s) Analysis – Part II).			
If no, discard solution.			
<b>Solution Identifier</b>	<u>2</u>	<b>Short Solution Title</b>	Outsource development of Virginia EIMS
<b>Based on decision criteria 2.a-2.e, is the potential solution a viable solution?</b>			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If yes, continue to Section E (Solution(s) Analysis – Part II).			
If no, discard solution.			
<b>Solution Identifier</b>	<u>3</u>	<b>Short Solution Title</b>	Outsource solution for Virginia EIMS
<b>Based on decision criteria 2.a-2.e, is the potential solution a viable solution?</b>			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
If yes, continue to Section E (Solution(s) Analysis – Part II).			
If no, discard solution.			

## E. Solution(s) Analysis – Part II

*Solution has been proven viable. Perform a Cost Benefit Analysis for the solution and calculate the Return on Investment. Provide a summary of the results below. A Cost Benefit Analysis and Return on Investment must be performed for each viable solution. Duplicate Solution(s) Analysis - Part II (Section E) for each solution being considered.*

NOTE: only one solution is considered viable

**Solution Identifier** 3 **Short Solution Title** Outsource solution for Virginia EIMS

### 1. Cost Benefit Analysis Summary

*Summarize the results of the Cost Benefit Analysis for this solution. See Project Initiation (Section 2) of the Commonwealth Project Management Guideline for information on how to perform a Cost Benefit Analysis.*

The Virginia Board of Education, through its *Consolidated State Application and Accountability Workbook*, has agreed to meet the goals and requirements of the No Child Left Behind Act of 2001 (NCLB), resulting in almost \$300 million annually in federal funding for education. The NCLB reporting requirements alone require that Virginia develop and maintain a longitudinal student information system. Such a system will enable Virginia to meet the high academic goals of NCLB as well by providing more accurate and timely information for decision-making, and training and tools for stakeholders at all levels of education.

The cost-benefit analysis examined the expected benefits and costs to Virginia that would result from a decision to implement Virginia EIMS as proposed in this summary. The Virginia Department of Education considers the move to Virginia EIMS as an investment in educational decision-making.

Based on the cost of similar systems in other states, and based on our experience with school division student information systems in Virginia, we project the project as proposed to produce a net tangible benefit of \$13 million over the next 10 years. Intangible benefits include redirecting 241,000 hours per year from administrative reporting to instruction of students, increased ability to make effective instructional decisions through information-based decision-making, tools to analyze and target specific areas of instruction or groups of students for improvement and to readily explore the relationship between costs and educational program performance. More timely and accurate reporting of Virginia education information has the potential to improve economic development by attracting people and businesses to the commonwealth.

## 2. Return on Investment (ROI) Summary

*Summarize the estimated return achieved as a result of the investment made and explain the ROI method used. There are several ways to calculate ROI. Any method is acceptable but the same method must be used for each solution analyzed. See Project Initiation (Section 2) of the Commonwealth Project Management Guideline for instructions on Return on Investment Calculations.*

The Return on Investment (ROI) was estimated for two and ten years (the anticipated life of the investment). As expected, a negative ROI in the first two years of development reflect the short-term burden imposed during the transition from the current systems to Virginia EIMS. The 10-year ROI reflects only the net tangible benefit of \$13 million resulting from a decrease in administrative paperwork and reporting. The break-even point occurs in Year 5.

### 2-year ROI Analysis

2 year savings 8,600,000.00  
2 year cost 14,900,000.00  
Net Benefit -6,300,000.00  
ROI Percent -42.28

### 10-year ROI Analysis

10 year savings 47,500,000.00  
10 year cost 34,500,000.00  
Net Benefit 13,000,000.00  
ROI Percent 37.68

## F. Comparison of Solutions

*Based on the analysis performed, rate how each solution measured up against each decision criterion. A recommended Rating Scale is: 1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Very Good. Compare the rating results to determine which solution to recommend. Enter in the Solution Identifier in Boxes that are shaded.*

Decision Criteria	Solutions						
	1	2	3				
Business Process Impact	1	3	5				
Technical Feasibility	3	4	5				



<i>Maturity of Solution</i>	4	4	4				
<i>Resources Required</i>	1	3	5				
<i>Constraints Impact</i>	3	4	5				
<i>Cost Benefit Analysis</i>	--	--	--				
<i>Return on Investment</i>	--	--	--				
<i>Other</i>							
<i>Total Score</i>	12	18	24				

## G. Preliminary Recommendation

*Describe the Recommended Solution and provide a summary of the rationale for selecting it.*

### 1. Recommended Solution

*Specify the Recommended Solution selected as a result of the analysis. Use the description previously provided in Section D of this document.*

**Solution Identifier**   3   **Short Solution Title** Outsource solution for Virginia EIMS

Allow a vendor to propose solution that may include a combination of COTS, custom development, leveraging of work completed for other state departments of education, use of multiple vendor packages for components, and multiple options for hosting and ongoing support. VDOE selects the best, most cost-effective option.

### 2. Recommended Solution Justification

*Explain why the Recommended Solution was chosen over the other solutions considered.*

Outsourcing a solution for Virginia EIMS takes into account and leverages work already completed by other states, and keeps Virginia's options open for creative solutions to our need that may not have otherwise been considered. We also believe that outsourcing utilizes scarce state personnel resources in the most effective way.

## H. Decision

*Document the project sponsor's or designated agency manager's decision regarding the Recommended Solution. If the Recommended Solution is accepted, a Project Proposal is developed.*

   **Accepted**         **Rejected**         **On Hold**         **Requesting More Information**

*Approved By:*

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_